



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,021	12/30/2003	Hao Bi	CS23442RL	8438
20280	7590	09/20/2005	EXAMINER	
MOTOROLA INC 600 NORTH US HIGHWAY 45 ROOM AS437 LIBERTYVILLE, IL 60048-5343			DESIR, PIERRE LOUIS	
			ART UNIT	PAPER NUMBER
			2681	

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/749,021

Applicant(s)

BI ET AL.

Examiner

Pierre-Louis Desir

Art Unit

2681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/30/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 7 is objected to because of the following informalities: “the first second layer” should be “the first and second layer.” Appropriate correction is required.

Note: for the process of examination, examiner will interpret “the first second layer” as “the first and second layer.”

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 5, 9-12, 20, 22-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Sarkinen et al. (Sarkinen), Pub. No. US 20030211855.

Regarding claim 1, Sarkinen discloses a method in wireless communications network infrastructure, the method comprising: transmitting first layer broadcast/multicast service content information on a first channel (i.e., transmits control information resident in a MBMC) (see page 4, paragraph 26, also refer to paragraph 16); transmitting second layer broadcast/multicast service content information on a second channel (i.e., transmits user data provided at the second MBMC) (see page 4, paragraph 26, also refer to paragraph 16), at least one of the first and second channels a shared broadcast channel (i.e., downlink shared channel) (see page 5,

Art Unit: 2681

paragraph 38), the first layer broadcast/multicast service content information related to the second layer broadcast/multicast service content information (i.e., both the control information and the user data are related to multicast or broadcast services) (see abstract), at least one of the first and second layers capable of being decoded and used without the other of the first and second layers (mobile station decodes the physical channel and the logical channel on which the user data is encoded and provides the user data to at least one of the first information service entities) (see page 3, paragraph 17, lines 10-22).

Regarding claim 2, Sarkinen discloses a method (see claim 1 rejection) wherein transmitting the first and second layer broadcast/multicast service content information from a common source (see page 1, paragraph 11).

Regarding claim 3, Sarkinen discloses a method (see claim 1 rejection) wherein transmitting a message identifying at least one of the first and second channels before transmitting the first and second broadcast/multicast service content information (i.e., transmitting the logical channel on the physical channel to the controller) (see abstract).

Regarding claim 5, Sarkinen discloses a method (see claim 1 rejection) wherein transmitting the first layer broadcast/multicast service content information and transmitting the second layer broadcast/multicast service content information with sufficient temporal proximity to enable substantially synchronized integration of the first and second layer broadcast/multicast service content information by a recipient (i.e., the multicast and broadcast related information and the user data may be transmitted during an active multicast or broadcast session. Thus, one skilled in the art would unhesitatingly conceptualize that with the transmission being done during

Art Unit: 2681

an active session, there would be some substantially integration or combination of the information and data being transmitted) (see page 2, paragraph 11).

Regarding claim 9, Sarkinen discloses a method (see claim 1 rejection) the first layer broadcast/multicast service content information is baseline broadcast/multicast service information transmitted on a shared broadcast channel (i.e., control information, which is transmitted over the common channel) (see paragraphs 16, 38, and 47); the second layer broadcast/multicast service content information is baseline broadcast/multicast service enhancement information transmitted on one of a second shared broadcast channel (i.e., user data information transmitted on a different logical channel) (see page 4, paragraph 26).

Regarding claim 10, Sarkinen discloses a method (see claim 1 rejection) comprising encrypting at least one of the first and second layer broadcast/multicast service content information before transmitting (i.e., the user data is encoded at the controller) (see abstract).

Regarding claim 11, Sarkinen discloses a method comprising encrypting the first and second layer broadcast/multicast service content information using different encryption keys before transmitting (i.e., the control information is encoded at the mobile station, and the user data information is encoded at the controller) (see abstract).

Regarding claim 12, Sarkinen discloses a method (see claim 1 rejection) comprising transmitting the first layer broadcast/multicast service content information using a first transmission parameter (using a first channel) (see paragraphs 16 and 26); transmitting the second layer broadcast/multicast service content information using a second transmission parameter different than the first transmission parameter (i.e., using a different channel) (see paragraphs 16 and 26).

Regarding claim 20, Sarkinen discloses a method (see claim 20 rejection) in wireless communications device (see abstract), the method comprising: receiving a message identifying a channel on which content will be transmitted (i.e., transmitting the logical channel on the physical channel to the controller) (see abstract); receiving first layer content information on a first channel (i.e., transmits control information resident in a MBMC) (see page 4, paragraph 26, also refer to paragraph 16); receiving second layer content information on a second channel (i.e., transmits user data provided at the second MBMC) (see page 4, paragraph 26, also refer to paragraph 16), at least one of the first and second channels identified in the message (see abstract, and paragraph 16).

Regarding claim 22, Sarkinen discloses a method (see claim 20 rejection) wherein the wireless communication device is a broadcast/multicast subscriber device (i.e., mobile station) (see abstract), and receiving first layer content information includes receiving first layer broadcast/multicast content information (see page 4, paragraph 26, also refer to paragraph 16); receiving second layer content information includes receiving second layer broadcast/multicast content information (see page 4, paragraph 26, also refer to paragraph 16).

Regarding claim 23, Sarkinen discloses a method (see claim 20 rejection) wherein receiving first layer content information on a first channel includes receiving the first layer content information on a first broadcast channel (i.e., receiving control information or user data information on a logical channel) (see abstract, page 2, paragraph 16, and page 4, paragraph 26).

Regarding claim 24, Sarkinen discloses a method (see claim 20 rejection) wherein the first and second layer content information is encrypted (i.e., the control information and user data information are encoded) (see abstract, and page 2, paragraph 16), decrypting the first layer

Art Unit: 2681

content information with a first key (i.e., the control information is decoded at the controller) (see page 2, paragraph 16), decrypting the second layer content information with a second key that is different than the first key (i.e., the user data information is decoded at the mobile station).

Regarding claim 25, Sarkinen discloses a method wherein at least one of the first and second layer content information is encrypted (i.e., encoded control information), receiving at least one decryption key for the at least one decrypted first and second layer content information (i.e., the control information is decoded at the controller. With the control information being decoded at the controller, one skilled in the art would unhesitatingly conceptualize the inherent step of receiving the decryption key so that the decoding process could take place) (see abstract, and page 2, paragraph 16), decrypting the at least one decrypted first and second layer content information with the decryption key (i.e., the control information is decoded at the controller) (see abstract, and page 2, paragraph 16).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 6-8, and 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sarkinen in view of Ranta-Aho et al. (Ranta-Aho), Pub. No. US 20040081125.

Regarding claim 4, Sarkinen discloses a method as described above (see claim 1 rejection).

Although Sarkinen discloses a method as described above, Sarkinen does not specifically disclose a method wherein transmitting the first layer broadcast/multicast service content information and transmitting the second layer broadcast/multicast service content information substantially simultaneously.

However, Ranta-Aho discloses a method wherein broadcast or simulcast content information may be received simultaneously (see paragraph 70).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described by Sarkinen with the teachings of Ranta-Aho to arrive at the claimed invention. A motivation for doing so would have been to ensure the proper transport of the content information.

Regarding claim 6, Sarkinen discloses a method as described above (see claim 1 rejection).

Although Sarkinen discloses a method comprising transmitting content information (encoded control information or encoded user data information) on a shared channel (see abstract, and paragraph 16 and 38), Sarkinen does not specifically disclose a method comprising transmitting the second layer broadcast/multicast service content information on a dedicated channel.

However, Ranta-Aho discloses a method wherein multicast messages are sent in the downlink shared channels (page 1, paragraph 22), and MBMS content is sent on the dedicated channel (see page 3, paragraph 58).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described by Sarkinen with the teachings of Ranta-Aho to arrive at the claimed invention. A motivation for doing so would have been to ensure the proper transport of the content information.

Regarding claim 7, Sarkinen discloses a method as described above (see claim 1 rejection).

Although Sarkinen discloses a method as described, Sarkinen does not specifically disclose a method comprising transmitting third layer broadcast/multicast service content information on a second shared channel, the third layer broadcast/multicast service content information related to the first second layer content information.

However, Ranta-Aho discloses a method comprising transmitting third layer broadcast/multicast service content information on a second shared channel, the third layer broadcast/multicast service content information related to the first second layer content information (i.e., MBMS content is sent from a core network to one or several transmission controllers such as BSCs or RNC (first layer transmission). The controllers transmit this MBMS content to one or more radio transmitters such as BTSs or Nodes B (second layer transmission). All transmitters receiving this MBMS content transmit this content, i.e. the multicast messages, to one or more terminals via Common channel MBMS transmission (third layer transmission on a shared or common channel) (see page 2, paragraph 46).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described by Sarkinen with the teachings of Ranta-Aho to

arrive at the claimed invention. A motivation for doing so would have been to provide a suitable transport channel as related to the content information.

Regarding claim 8, Sarkinen discloses a method as described above (see claim 1 rejection).

Although Sarkinen discloses a method as described above, Sarkinen does not specifically disclose a method comprising transmitting reliability information on a third channel, the reliability information for decoding at least one of the first and second layer broadcast/multicast service content information.

However, Ranta-Aho discloses a method comprising transmitting reliability information on a third channel, the reliability information for decoding at least one of the first and second layer broadcast/multicast content information (i.e., information is provided on the necessary parameters such as spreading code in the other cells, which parameters allow the terminal to decode the multicast content) (see paragraphs 31 and 52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described by Sarkinen with the teachings of Ranta-Aho to arrive at the claimed invention. A motivation for doing so would have been to ensure the authentication of the information being transmitted and received.

Regarding claim 13, Sarkinen discloses a method in wireless communications network (see abstract) comprising transmitting content and reliability information on a first channel (i.e., transmitting encoded control information on a logical channel) (see abstract and page 2, paragraph 16).

Although Sarkinnen discloses a method comprising transmitting user data information on a second channel (see paragraphs 16 and 26), Sarkinnen does not specifically disclose a method comprising transmitting additional reliability information for the content on a second channel, the reliability and additional reliability information for decoding the content.

However, Ranta-Aho discloses a method comprising transmitting reliability information on a channel (i.e., information is provided on the necessary parameters such as spreading code in the other cells, which parameters allow the terminal to decode the multicast content) (see paragraphs 31 and 52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described by Sarkinnen with the teachings of Ranta-Aho to arrive at the claimed invention. A motivation for doing so would have been to ensure the authentication of the information being transmitted and received.

Regarding claim 14, Sarkinnen discloses a method (see claim 13 rejection) wherein transmitting the content, the reliability information with sufficient temporally proximity (i.e., the multicast and broadcast related information and the user data may be transmitted during an active multicast or broadcast session. Thus, one skilled in the art would unhesitatingly conceptualize that with the transmission being done during an active session, there would be some substantially integration or combination of the information and data being transmitted) (see page 2, paragraph 11).

Although Sarkinnen discloses a method as described, Sarkinnen does not specifically disclose a method wherein transmitting the content, the reliability information and the additional reliability information with sufficient temporally proximity to enable decoding of the content, by

a recipient, using the reliability and additional reliability information.

However, Ranta-Aho discloses a method wherein information is provided on the necessary parameters such as spreading code in the other cells, which parameters allow the terminal to decode the multicast content (see paragraphs 31 and 52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described by Sarkinen with the teachings of Ranta-Aho to arrive at the claimed invention. A motivation for doing so would have been to ensure the authentication of the information being transmitted and received.

Regarding claim 15, Sarkinen discloses a method as described above (see claim 13 rejection).

Although Sarkinen discloses a method comprising transmitting the content and reliability information (encoded control information or encoded user data information) on a shared channel (see abstract, and paragraph 16 and 38) Sarkinen does not specifically disclose a method comprising transmitting additional broadcast/multicast service content on a dedicated channel, the broadcast/multicast service content and reliability information and the additional broadcast/multicast service content transmitted at substantially the same time.

However, Ranta-Aho discloses a method wherein multicast messages are sent in the downlink shared channels (page 1, paragraph 22, also refer to paragraphs 31 and 52), and MBMS content is sent on the dedicated channel (see page 3, paragraph 58, also refer to paragraphs 31 and 52), and wherein broadcast or simulcast content information may be received simultaneously (see paragraph 70).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described by Sarkinnen with the teachings of Ranta-Aho to arrive at the claimed invention. A motivation for doing so would have been to ensure the proper transport of the content information.

Regarding claim 16, Sarkinnen discloses a method as described above (see claim 13 rejection).

Although Sarkinnen discloses a method comprising transmitting the content and reliability information (encoded control information or encoded user data information) on a shared channel (see abstract, and paragraph 16 and 38), Sarkinnen does not specifically disclose a method comprising transmitting additional reliability information for the content on a dedicated channel.

However, Ranta-Aho discloses a method wherein multicast messages are sent in the downlink shared channels (page 1, paragraph 22), and MBMS content is sent on the dedicated channel (see page 3, paragraph 58), and comprising transmitting additional reliability information for the content (which is inherently transmitted on another channel) (see paragraphs 31 and 52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described by Sarkinnen with the teachings of Ranta-Aho to arrive at the claimed invention. A motivation for doing so would have been to provide a suitable transport channel as related to the content information.

Regarding claim 17, Sarkinnen discloses a method as described above (see claim 13 rejection).

Although Sarkinnen discloses a method comprising transmitting the content and reliability information (encoded control information or encoded user data information) on a shared channel (see abstract, and paragraph 16 and 38), Sarkinnen does not specifically disclose a method comprising transmitting additional reliability information for the content on another shared channel.

However, Ranta-Aho discloses a method wherein multicast messages are sent in the downlink shared channels (page 1, paragraph 22), and MBMS content is sent on the dedicated channel (see page 3, paragraph 58), and comprising transmitting additional reliability information for the content (which is inherently transmitted on another channel) (see paragraphs 31 and 52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described by Sarkinnen with the teachings of Ranta-Aho to arrive at the claimed invention. A motivation for doing so would have been to provide a suitable transport channel as related to the content information.

Regarding claim 18, Sarkinnen discloses a method as described above (see claim 13 rejection).

Although Sarkinnen discloses a method comprising transmitting the content information and reliability information using a first transmission parameter (i.e., using a first channel) (see abstract, and paragraphs 16 and 26); transmitting a second layer broadcast/multicast service content information (i.e., user data information) using a second transmission parameter different than the first transmission parameter (i.e., using a different channel) (see abstract, and paragraphs 16 and 26), Sarkinnen does not specifically disclose transmitting the additional reliability

information using a second transmission parameter different than the first transmission parameter.

However, Ranta-Aho discloses a method comprising transmitting reliability information on a channel (i.e., information is provided on the necessary parameters such as spreading code in the other cells, which parameters allow the terminal to decode the multicast content) (see paragraphs 31 and 52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described by Sarkinen with the teachings of Ranta-Aho to arrive at the claimed invention. A motivation for doing so would have been to ensure the authentication of the information being transmitted and received.

Regarding claim 19, Sarkinen discloses a method as described above (see claim 13 rejection).

Although Sarkinen discloses a method as described above, Sarkinen does not specifically disclose a method transmitting the content and reliability information on a first channel substantially simultaneously with transmitting the additional reliability information for the content on the second channel.

However, Ranta-Aho discloses a method wherein broadcast or simulcast content information may be received simultaneously (see paragraph 70).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described by Sarkinen with the teachings of Ranta-Aho to arrive at the claimed invention. A motivation for doing so would have been to ensure the proper transport of the content information.

6. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sarkinnen in view of Willenegger et al. (Willenegger), Pub. No. US 20050075124.

Sarkinnen discloses a method as described above (see claim 20 rejection).

Although Sarkinnen discloses a method as described above, Sarkinnen does not specifically disclose a method comprising combining the first and second layer content at the wireless subscriber device.

However, Willenegger discloses a method wherein the user equipment is enabled to combine received MBMS transmissions (see page 16, paragraph 253).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described by Willenegger with the teachings of Sarkinnen to arrive at the claimed invention. A motivation for doing so would have been to provide improved performance (see page 16, paragraph 255).

7. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sarkinnen and Ranta-Aho, in further view of Willenegger.

Regarding claim 26, Sarkinnen discloses a method in broadcast/multicast subscriber device (see abstract), the method comprising: receiving first layer content information on a first channel (i.e., control information) (see abstract, and page 2, paragraph 16, and page 4, paragraph 26); receiving second layer content information on a second channel (i.e., user data) (see abstract, page 2, paragraph 16, and page 4, paragraph 26), at least one of the first and second channels a shared broadcast channel (i.e., downlink shared channel) (see page 5, paragraph 38).

Sarkinnen does not specifically disclose a method comprising receiving first and second layer content information simultaneously. However, Ranta-Aho discloses a method wherein broadcast or simulcast content information may be received simultaneously (see paragraph 70).

Although Sarkinnen and Ranta-Aho disclose a method as described, Sarkinnen and Ranta-Aho do not specifically disclose a method comprising integrating the first and second layer content information at the wireless communications device.

However, Willenegger discloses a method wherein the user equipment is enabled to combine or integrate received MBMS transmissions (see page 16, paragraph 253).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described by Willenegger with the teachings of Sarkinnen to arrive at the claimed invention. A motivation for doing so would have been to provide improved performance (see page 16, paragraph 255).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pierre-Louis Desir whose telephone number is 703-605-4312. The examiner can normally be reached on (571) 272-7799.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2681

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Pierre-Louis Desir

AU 2681

09/15/2005

JEAN GELIN
PRIMARY EXAMINER

